J. ent. Soc. sth. Afr. 1984
Vol. 47, No. 2, pp. 313—327

Coelidiinae (Hemiptera: Cicadellidae) described from South Africa in the genera *Palicus* Stål, *Equeefa* Distant and *Aletta* Metcalf, with descriptions of new species

by

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The taxonomic characters of the genera *Aletta* Metcalf and *Equeefa* Distant, as well as the species *A. lineoligera* (Stål) and *E. castelnaui* Distant are described. *Aletta pulchra* Evans is transferred to the new genus *Keia* and a new species, *K. decora*, is described. *Palicus fuscovarius* Stål is transferred to the new genus *Mgenia* and the new species *M. angusta* and *M. capeneri* are described. *Equeefa albicosta* Naudé is transferred to the new genus *Modderena* and two new species, *M. nkomati* and *M. vendae* are described.

The South African leafhoppers described by various authors in the genera *Palicus*, *Equeefa* and *Aletta* are all fairly large and robust and possess long hind legs, which, in spite of their apparent inability to fly, give them an extraordinary agility. Nielson (1975) has stated that these genera should be transferred to a new subfamily, but in the present study, in which some of the existing species are assigned to new genera and five new species are described, they are provisionally retained in the Coelidiinae.

The assistance rendered by the following institutions with the loan of specimens and the location of type specimens is gratefully acknowledged (the abbreviations in parenthesis refer to institutions where the types of new species are deposited):

South African Museum, Cape Town (SAM); Transvaal Museum, Pretoria (TM); Durban Museum and Art Gallery, Durban; National Collection of Insects, Plant Protection Research Institute, Pretoria (NCI); Entomological Collection of the University of Pretoria, Pretoria (UP); British Museum (Natural History), London (BM); Hope Entomological Collections, Oxford; Naturhistoriska Riksmuseet, Stockholm; Muséum National d'Histoire Naturelle, Paris; Naturhistorisches Museum, Vienna; Museo Zoologico de 'La Specola', Florence.

Paratypes are also placed in the Entomological Collection of the University of Stellenbosch (US).

Aletta Metcalf

Aletta Metcalf, 1952: 229. Type species *Coelidia lineoligera* Stål, 1855: 98, by original designation.
Palicus Stål, 1866: 120. Syn.

Robust leafhoppers, with head narrower than pronotum (Fig. 1). Crown longer medially than next eyes and lateral margins convergent basally; anterior margin obtusely rounded and also rounded to face (Fig. 11); discal region longitudinally rugulose. Distance between ocellus and adjacent eye about three times diameter of ocellus. Eyes large, set fairly close together. Coronal suture absent. Frontoclypeus elongate, narrow, almost parallel-sided, 1,5 × as broad as base of anteclypeus and shagreened (Fig. 2). Anteclypeus long, shagreened and its apex conspicuously bifid. Lora small, shagreened. Gena very weakly notched below eye.

Pronotum transversely rugulose, somewhat longer medially than crown. Scutellum short, less than half medial length of pronotum and also transversely rugulose; without transverse impression. Tegmina broadly rounded apically, coreaceous, with venation largely obscured; no appendix (Fig. 5). Hind wings much reduced, narrow. Spinulation of fore tibia 6 + 6; hind femoral setal formula 2 + 1 + 1 + 1 + 1, with terminal pair apical (Fig. 8).

Tenth tergite of male strongly sclerotized, oblong in dorsal view (Fig. 9). Pygofer well sclerotized, short middorsally. Pygofer lobes short and bearing short setae posterodorsally (Fig. 10). Aedeagus symmetrical; socle very long; shaft cylindrical, with gonopore on ventral side near apex (Figs 3, 6). Connective with broad stem and short arms (Fig. 7). Style long, narrow and without preapical angle (Fig. 12). Valve fused laterally with pygofer. Plate narrow, elongate, almost parallel-sided and with numerous small setae (Fig. 4).

The genus *Aletta* was proposed by Metcalf to replace *Palicus*, which is preoccupied by use in the Crustacea.

Alletta lineoligera (Stål), Figs 1–12

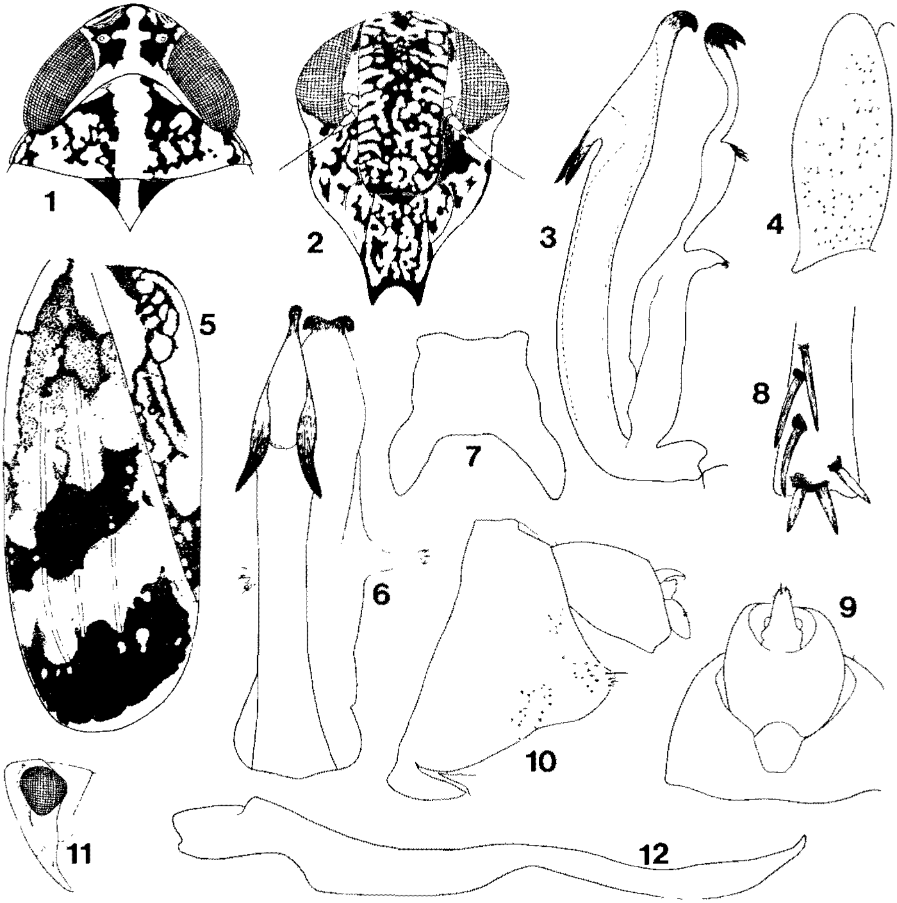
Coelidia lineoligera Stål, 1855: 98–99
Palicus lineoligera Stål, 1866: 120
Aletta lineoligera (Stål); Metcalf, 1952: 229

MALE. Length from apex of crown to tips of tegmina 5,75 mm; transocular width 1,90 mm; greatest width of pronotum 2,12 mm. Colour of head, thorax and tegmina dirty white, mottled (fairly variably) with light brown to fuscous or black (Figs 1, 5); frontoclypeus and anteclypeus finely maculated with black (Fig. 2). Veins of tegmina only discernable in paler areas.

Pygofer lobe triangular behind. Aedeagus with long socle, slender in lateral view but broad in ventral view and terminating in pair of small hooks; shaft cylindrical, with small apical hook and pair of conspicuous subapical teeth (Figs 3, 6). Style as in Fig. 12, connective as in Fig. 7 and plate as in Fig. 4.

FEMALE. Length 5,50–6,25 mm; transocular width 1,80–2,12 mm; greatest width of pronotum 2,00–2,36 mm. Seventh abdominal sternite shallowly V-shaped behind.

MATERIAL EXAMINED. SOUTH AFRICA: The single female (not male, as stated by Stål, 1866) from the collection of the Naturhistoriska Riksmuseet, Stockholm, on which this species was based, was studied. It was collected by J. Wahlberg and Stål (1855) gives the locality as 'terra Natalensis'. Additional specimens, which could be associated with this holotype, consisted of one male and four females, col-



Figs 1–12. *Aletta lineoligera* (Stål), ♂. 1. Head and thorax, dorsal view. 2. Face. 3. Aedeagus, lateral view. 4. Plate, ventrolateral view. 5. Tegmen. 6. Aedeagus, ventral view. 7. Connective. 8. Apex of right hind femur. 9 & 10. Pygofer, dorsal and lateral views. 11. Head, lateral view. 12. Style, lateral view.

lected respectively by N. L. H. Krauss (i.1957), R. E. Turner (vii.1926), A. L. Bevis (10.vii.1925 and xi–xii.1943) and A. L. Capener (25–30.ix.1949) at Eshowe, Natal.

Equeefa Distant

Equeefa Distant, 1910: 242. Type species *E. castelnaui* Distant, 1910: 243, by monotypy.

Robust leafhoppers, in general habitus resembling *Alleta*, but smaller. Head as wide as or only slightly narrower than pronotum (Fig. 13). Crown variably produced beyond anterior margin of eyes and lateral margins convergent basally; anterior margin obtusely rounded to fairly sharply pointed and rounded to face; discal region smooth or indistinctly longitudinally rugulose. Coronal suture absent. Distance between ocellus and adjacent eye three to five times diameter of ocellus. Eyes smaller than in *Aletta*. Frontoclypeus shagreened, fairly broad, distinctly wedge-shaped and about twice width of anteclypeus at its widest (Fig. 15). Anteclypeus long, shagreened, broadening apically and its apex bifid.Lora small, shagreened.

Pronotum medially longer (to varying degree) than crown. Scutellum short, less than one third medial length of pronotum; without transverse impression. Tegmina rounded apically, coreaceous, with venation usually rather indistinct; three closed anteapical cells and no appendix (Fig. 20). Hind wings narrow. Spinulation of fore tibia 5 + 5; hind femoral setal formula 2 + 1 + 1 + 1, with terminal pair apical (Fig. 22).

Male with tenth tergite well sclerotized laterally and in dorsal view varying in shape from parallel-sided to oblong. Pygofer short middorsally (Fig. 19). Pygofer lobes setose. Aedeagus symmetrical (Figs 16, 17), with gonopore on ventral side; socle with terminal hook-shaped process. Connective broad, with relatively short or reduced basal arms (Fig. 23). Style elongate, without preapical angle (Fig. 18). Valve fused laterally with pygofer. Plate long, setose, almost parallel-sided (Fig. 21).

This genus is close to *Aletta*, but differs in the spinulation of the fore tibia, the width of the frontoclypeus and the size of the eyes and scutellum.

Equeefa castelnaui Distant, Figs 13–23

Equeefa castelnaui Distant, 1910: 243

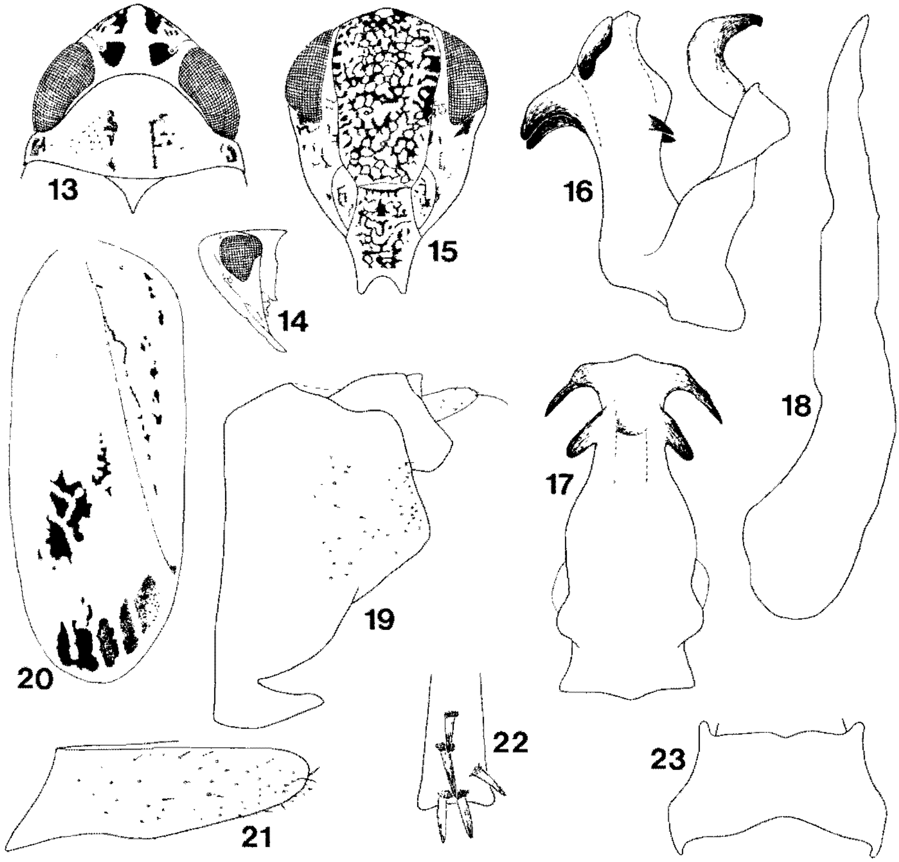
MALE. Length from apex of crown to tips of tegmina 4,75–5,50 mm; transocular width 1,68–1,80 mm; greatest width of pronotum 1,70–1,92 mm. Colour of head and pronotum off-white, variably mottled with light brown to fuscous or black; disc of crown with two distinct black spots (Fig. 13); frontoclypeus and anteclypeus delicately maculated with black. Tegmina light brown with variable fuscous spots and ivory white areas (Fig. 20); veins off-white.

Tenth tergite parallel-sided in dorsal view. Aedeagus massive; on ventral side with two pairs of variously developed preapical processes and dorsally with pair of small teeth; socle large, terminating in hook-shaped process with median gutter (Figs 16, 17). Style almost straight, with pointed apex. Connective as in Fig. 23. Plate as in Fig. 21.

FEMALE. Length 5,41–5,83 mm; transocular width 1,96–2,04 mm; greatest width of pronotum 2,00–2,05 mm. Seventh abdominal sternite V-shaped.

MATERIAL EXAMINED. SOUTH AFRICA: The single male (labelled British Caffraria, 1862), housed in the Hope Entomological Collections, Oxford, on which this species was based, was studied. Many additional specimens from the Cape Province were also examined, but data on their distribution, as well as descriptions of several new species, will be presented in a forthcoming publication on the leafhoppers associated with *Elytropappus rhinocerotis* Less.

As was already noted by Naudé (1926), *Equeefa castelnaui* is probably a synonym of *Palicus conspersifrons*, which Stål (1866) described from a single female (locality 'Terra capensis') in the Signoret Collection. Unfortunately this specimen could not be



Figs 13–23. *Equeefa castelnaui* Distant, holotype ♂. 13 & 14. Head and thorax, dorsal and lateral views. 15. Face. 16 & 17. Aedeagus, lateral and ventral views. 18. Style, ventral view. 19. Pygofer, lateral view. 20. Tegmen. 21. Plate. 22. Apex of right femur. 23. Connective.

traced (it is not in the Naturhistorisches Museum, Vienna, or the Museo Zoologie de 'La Specola', Forence, or the Muséum National d'Histoire Naturelle, Paris), but as *E. castelnaui* is the only coelidiid from the Cape Peninsula region agreeing with Stål's description, its synonymy with *conspersifrons* is very likely, except if Stål's type specimen was collected further inland.

Keia gen. nov.

Type species *Aletta pulchra* Evans, 1955: 27–28

Elegant, elongate leafhoppers with head as broad as or broader than pronotum. Anterior margin of crown produced, sharply angulate, but rounded to face; discal region conspicuously longitudinally rugulose (Figs 24, 25). Coronal suture absent. Distance between ocellus and adjacent eye twice diameter of ocellus. Frontoclypeus, anteclypeus and lora shagreened. Frontoclypeus wedge-shaped (Fig. 26). Anteclypeus widening slightly apically and apex weakly emarginate.

Pronotum transversely rugulose and medially about two thirds length of crown. Scutellum large, about two thirds length of crown, with distinct transverse impression. Tegmina rounded apically, leathery, but with distinct venation; three closed anteapical cells; no appendix (Fig. 31). Hind wings as long as tegmina, but narrower. Spinulation of fore tibia 2 + 4 or 3 + 4; hind femoral setal formula 2 + 1 + 1 + 1, with terminal pair apical (Fig. 32).

Tenth tergite of male strongly sclerotized. Pygofer well sclerotized, short middorsally (Fig. 27). Pygofer lobes short, roughly triangular and bearing short setae posterodorsally. Shaft of aedeagus asymmetrical; socle with large dorsal appendage (Figs 28, 35). Connective with very short, broad stem and short arms. Style long, narrow. Valve fused laterally to pygofer, but sometimes incompletely separated. Plate cudgel-shaped and setose.

This genus differs from the previous genera in the bright colouration, the spinulation of the fore tibia, the shape of the head and the texture of the tegmina.

Keia pulchra (Evans), comb. nov., Figs 24–34

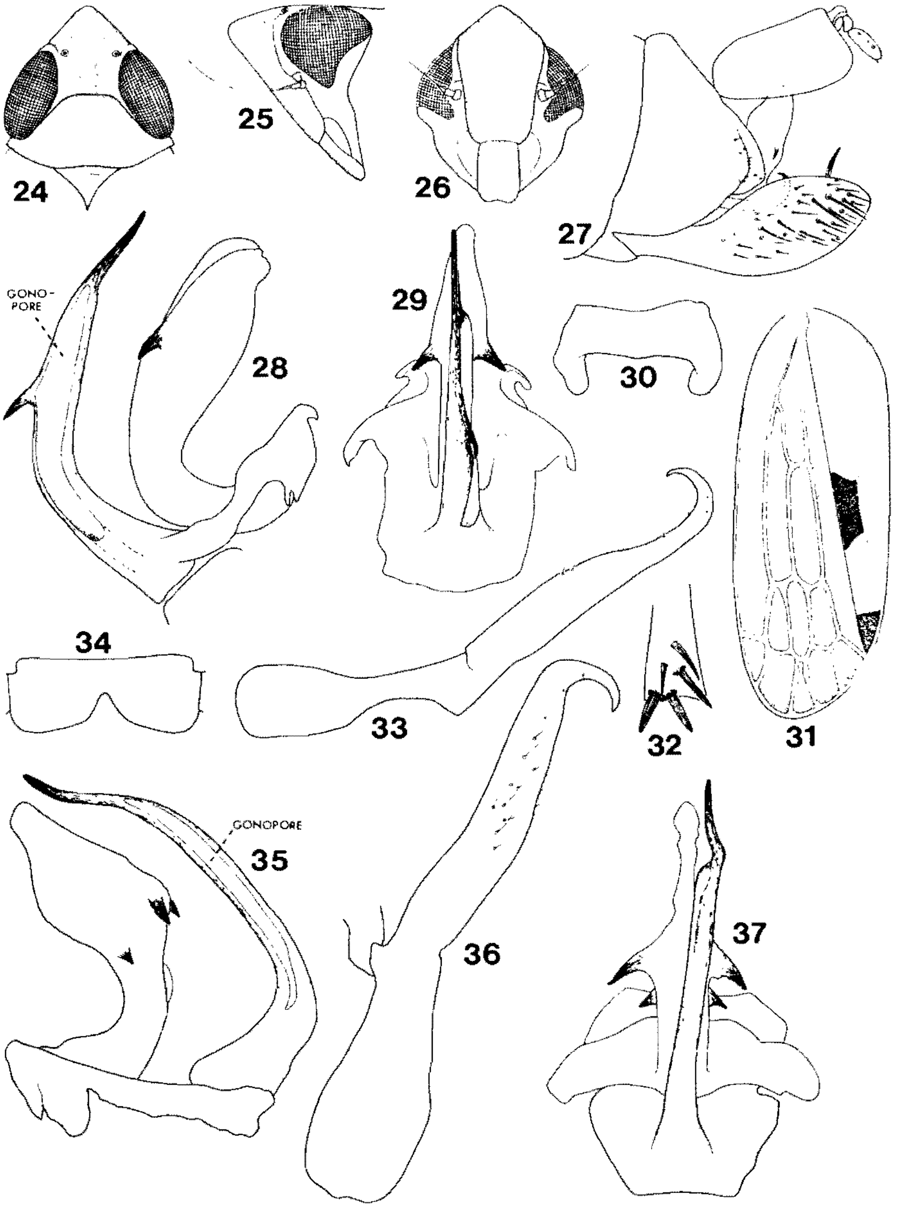
Aletta pulchra Evans, 1955: 27–28

MALE. Length from apex of crown to tips of tegmina 4,92–5,50 mm; transocular width 1,48–1,68 mm; greatest width of pronotum 1,44–1,64 mm. Colour pattern striking. Crown light yellow, but anterolaterally and medially between eyes with deep orange areas. Frontoclypeus orange-yellow and without distinct horizontal arcs. Pronotum with disc light to darker orange, but each lateral angle with ivory-white band, which is confluent with concolourous band of clavus. Scutellum off-white. Clavus with two large ivory-white areas, separated from each other by dark brown band; apex of clavus also dark brown, but remainder of tegmen, i.e. area laterad of claval suture, light brown with whitish veins.

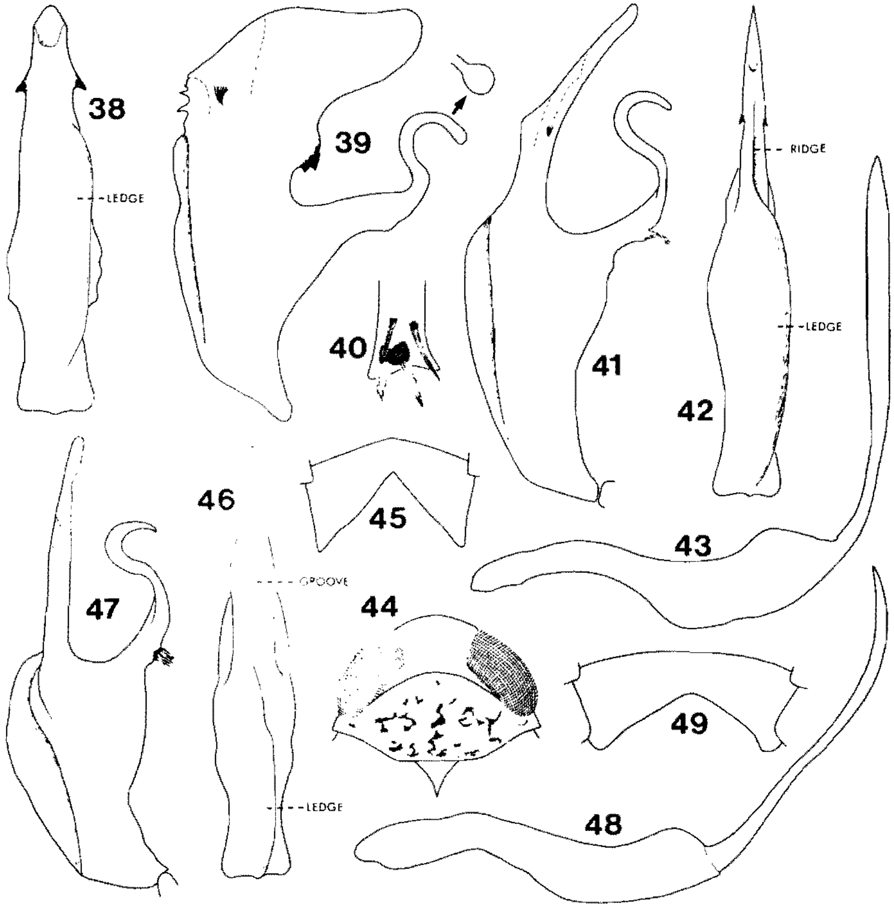
Pygofer lobe posteriorly with setae and short extension. Shaft of aedeagus with ventral tooth, apical tooth and elongate gonopore on right side (Figs 28, 29). Socle very wide and with long dorsal process, which sometimes bears tooth on each side. Style with apically hooked apophysis and short setae on dorsal side (Fig. 33). Connective as in Fig. 30. Plate as in Fig. 27.

FEMALE. Brachypterous. Length from apex of crown to tips of tegmina 5,16–5,91 mm, to tip of abdomen 5,37–6,08 mm; transocular width and greatest width of pronotum 1,48–1,72 mm. Hind margin of seventh abdominal sternite V-shaped (Fig. 34).

MATERIAL EXAMINED. Holotype ♀: SOUTH AFRICA: The holotype female (collected at Port St Johns, Pondoland, 1–9.vii.1923 by R. E. Turner) and three males (one figured) and four females (same collector's data, but additional dates 1–14.v.1923 and 12–30.vi.1923) housed in the British Museum, were studied. The following additional specimens were examined: 1 ♀, Port St Johns, 3.xii.1969, A. L. Capener; 1 ♂, 1 ♀, Gonubie, East London, xii.1974, J. G. Theron.



Figs 24–37. *Keia* spp. 24–34. *K. pulchra* (Evans). 24 & 25. Head and thorax, dorsal and lateral views. 26. Face. 27. Pygofer, lateral view. 28 & 29. Aedeagus, lateral and ventral views. 30. Connective. 31. Tegmen. 32. Apex of right hind femur. 33. Style, lateral view. 34. Seventh abdominal sternite of ♀. 35–37. *K. decora* sp. nov. 35. Aedeagus, lateral view. 36. Style, dorsal view. 37. Aedeagus, ventral view.



Figs 38–49. *Mgenia* spp. 38–40. *M. fuscovaria* (Stål). Aedeagus, ventral view. 39. Aedeagus of holotype, lateral view, with apex of hook-shaped process in dorsal view. 40. Apex of right hind femur. 41–45. *M. angusta* sp. nov. 41 & 42. Aedeagus of holotype, lateral and ventral views. 43. Style. 44. Head and thorax of holotype, dorsal view. 45. Hind margin of 7th abdominal sternite of ♀. 46–49. *M. capeneri* sp. nov. 46 & 47. Aedeagus of holotype, ventral and lateral views. 48. Style. 49. Hind margin of 7th abdominal sternite of ♀.

Keia decora sp. nov., Figs 35–37

MALE. Length from apex of crown to tips of tegmina 5,08–5,41 mm; transocular distance 1,56–1,72 mm; greatest width of pronotum 1,54–1,64 mm. Colouration as in *K. pulchra,* but area of tegmen laterad of claval suture dark brown. Aedeagus as in *K. pulchra,* but shaft without ventral tooth and with gonopore on left side (Figs 35, 37). Style (Fig. 36) broader than in *K. pulchra.*

FEMALE. Brachypterous. Length from apex of crown to tips of tegmina 5,50 mm, to tip of abdomen 5,94 mm; transocular width 1,80 mm; greatest width of pronotum 1,72 mm. Seventh abdominal sternite V-shaped behind.

MATERIAL EXAMINED. Holotype, ♂: SOUTH AFRICA: Grahamstown, 22.i.1984, T. G. Swanepoel (NCI). Paratypes: 1 ♂, Port Alfred, 22.i.1984, J. G. Theron (US); 1 ♀, Port Alfred, 7.ii.1966, A. L. Capener (NCI).

The colouration of the tegmina and the structure of the aedeagus and styles, separate this species from *K. pulchra*.

Mgenia gen. nov.

Type species *Coelidia fuscovaria* Stål, 1855: 99

Robust leafhoppers, in general habitus and size resembling *Equeefa*. Head about as wide or slightly narrower than pronotum (Fig. 44). Crown only moderately produced beyond anterior margin of eyes and lateral margins slightly convergent basally; anterior margin obtusely rounded and also rounded to face; dorsal region somewhat depressed and longitudinally rugulose; frontal region smooth or transversely rugulose. Coronal suture absent. Distance between ocellus and adjacent eye about twice diameter of ocellus. Eyes larger than in *Equeefa,* occupying about two thirds of dorsal surface of head. Frontoclypeus shagreened, narrow and almost parallel-sided. Anteclypeus long, shagreened, broadening apically, with rounded apex. Lora shagreened.

Pronotum transversely rugulose, about one and a half times medial length of crown. Scutellum short, less than half length of pronotum; without transverse impression. Tegmina rounded apically, semi-translucent, with conspicuous venation; three closed anteapical cells; no appendix. Hind wings narrow but almost as long as tegmina. Spinulation of fore tibia 5 + 6. Hind femoral setal fermula 2 + 1 + 1 (Fig. 40).

Tenth tergite strongly sclerotized. Pygofer middorsally incised almost to base by articular membrane of anal tube. Pygofer lobe setose posterodorsally. Aedeagus slightly asymmetrical, with ledge ventrally on right side of shaft (Fig. 38); gonopore ventral; socle always with terminal hook-shaped process (Fig. 39). Connective broad, with short basal arms. Style with long, blade-like apophysis. Valve fused laterally with pygofer. Plate long, narrow, almost parallel-sided and with macrosetae.

This genus differs from *Equeefa* in the spinulation of the fore tibia, the texture of the tegmina and the shape of the head.

Mgenia fuscovaria (Stål), comb. nov., Figs 38–40

Coelidia fuscovaria Stål, 1855: 99
Iassus setifer Walker, 1858: 271
Palicus fuscovarius Stål, 1866: 121
Equeefa natalia Naudé, 1929: 18

This species was described in detail by me (Theron 1976) under the name *Equeefa natalia*, but the occurrence of a narrow ventral ledge on the right side of the aedeagal shaft, was unfortunately omitted from the description and figures.

MATERIAL EXAMINED. Holotype, ♂: SOUTH AFRICA: The holotype male, two paratype males and a teneral paratype female ('var. b' of Stål 1866) from the Naturhistoriska Riksmuseet, Stockholm, were examined. These specimens are all labelled 'Caffraria, J. Wahlberg', but Stål (1855) gives the type-locality as 'terra Natalensi'.

The holotype of *Iassus setifer* Walker, from the British Museum, was also examined and its synonymy with *M. fuscovaria* confirmed. In the holotype the aedeagal shaft is somewhat broader in lateral view than in other specimens examined and it also bears a pair of small teeth subapically on the dorsal side (Fig. 39).

In addition to the localities mentioned previously (Theron 1976), specimens of *M. fuscovaria* were examined from Durbanville (i.vii.1974, J. de Kock), Umkomaas (vii.1946, A. L. Capener), Kloof, Natal (viii.1926, R. E. Turner), Louwsburg (23.vi.1969, J. G. Theron) and Eshowe (vi.1926, R. E. Turner; xii.1943, L. Bevis). The species seems to occur mainly in the southern and eastern coastal regions.

Mgenia angusta sp. nov., Figs 41–45

MALE. Length from apex of crown to tips of tegmina 5,00–6,25 mm; transocular width 1,64–1,88 mm; greatest width of pronotum 1,72–1,96 mm. Colouration and other external features as in *M. fuscovaria*, but crown shorter medially and more bluntly rounded in front (Fig. 44). Terminalia as in *M. fuscovaria*, but apical part of aedeagal shaft narrow, with ventral keel and one pair of small teeth (Figs 41, 42). Apophysis of style narrow, blade-like (Fig. 43).

FEMALE. Length 5,58–5,83 mm; transocular width 1,82–1,88 mm; greatest width of pronotum 1,88–1,96 mm. Seventh abdominal sternite with deep V-shaped cleft in hind margin (Fig. 45).

MATERIAL EXAMINED. Holotype, ♂; SOUTH AFRICA: Pretoria, 29.ix.1971, J. G. Theron (NCI). Paratypes: 1 ♀, same data as holotype (US); 2 ♂, Meintjieskop, Pretoria, 22.ix.1965, W. M. Hoffmann (NCI); 13 ♂, 5 ♀, Pretoria, 16.xii.1964, M. Hoffmann (NCI); 4 ♂, 4 ♀, Springbok Park, Pretoria, 11.x.1967, M. W. Algera (NCI); 1 ♂, Doringkloof, Pretoria, v.1980, A. P. du Toit (UP); 1 ♂, 1 ♀, Pretoria, i.1978, I. C. Sharp (UP); 2 ♂, 1 ♀, Witrivier, 27.v.1965, M. Hoffmann (NCI); 1 ♂, 2 ♀, Noordkaap, 12.i.1972, A. L. Capener (US); 1 ♂, Nelspruit, 10.ii.1966, P. Paliatseas (NCI); 2 ♂, Cango, Oudtshoorn, 19.i.1982, J. G. Theron (US); 3 ♂, Durbanville, 1.vii.1974, J. de Kock (US).

This species can be separated from *M. fuscovaria* by the shape of the aedeagal shaft and seems to have mainly a Highveld distribution. It occurs sympatric with *M. fuscovaria* in Durbanville, to which region (and Oudtshoorn) it may have been introduced.

Mgenia capeneri sp. nov., Figs 46–49

MALE. Length from apex of crown to tips of tegmina 4,79–5,37 mm; transocular width 1,62–1,74 mm; maximum width of pronotum 1,68–1,80 mm. Colouration and other external features as in *M. fuscovaria*. Terminalia generally as in *M. angusta*, but apical part of asymmetrical aedeagal shaft without teeth and ventrally with gutter (Figs 46, 47). Apophysis of style needle-like (Fig. 48).

FEMALE. Length 5,16–5,45 mm; transocular width 1,72–1,76 mm; greatest width of pronotum 1,76 mm. Hind margin of seventh abdominal sternite with V-shaped incision less pronounced than in *M. angusta* (Fig. 49).

MATERIAL EXAMINED. Holotype, ♂; SOUTH AFRICA: Wyllie's Poort, N. Transvaal, 11.ii.1941, A. L. Capener (NCI). Paratypes: 1 ♂, Duiwelskloof (on *Bridelia micrantha*), 15.vii.1965, P. Paliatseas (US); 1 ♂, Louis Trichardt, i–ii.1928, R. F. Lawrence (SAM); 1 ♂, 1 ♀, Entabeni, Soutpansberg, xi.1931, G. van Son (TM); 4 ♂, 1 ♀, Tshakoma, Soutpansberg, xi.1931, G. van Son (TM).

This species is close to *M. angusta*, but can be recognized by the acicular apophysis of the style and the absence of a ventral keel on the aedeagal shaft. It appears to be confined to northern Transvaal.

Modderena gen. nov.

Type species *Equeefa albicosta* Naudé, 1926: 81

Thick-set leafhoppers, with head wider than pronotum. Crown longer medially than next to eyes and lateral margins convergent basally; anterior margin obtusely rounded and also rounded to face; discal region fairly smooth; frontal region with transverse rugulae. Distance between ocellus and adjacent eye about twice diameter of ocellus. Coronal suture short. Frontoclypeus shagreened, almost parallel-sided and about twice width of anteclypeus. Anteclypeus shagreened, almost parallel-sided and its apex slightly bifid. Lora shagreened.

Pronotum transversely rugulose, somewhat longer medially than crown. Scutellum smooth, small, one sixth to one third medial length of pronotum and without transverse impression. Tegmina broadly rounded apically, coreaceous, with venation rather indistinct; no appendix. Hind wings almost as long as tegmina, but narrower. Spinulation of fore tibia 5 + 5; hind femoral setal formula 2 + 2 or 2 + 2 + 1, with terminal pair apical (Fig. 55).

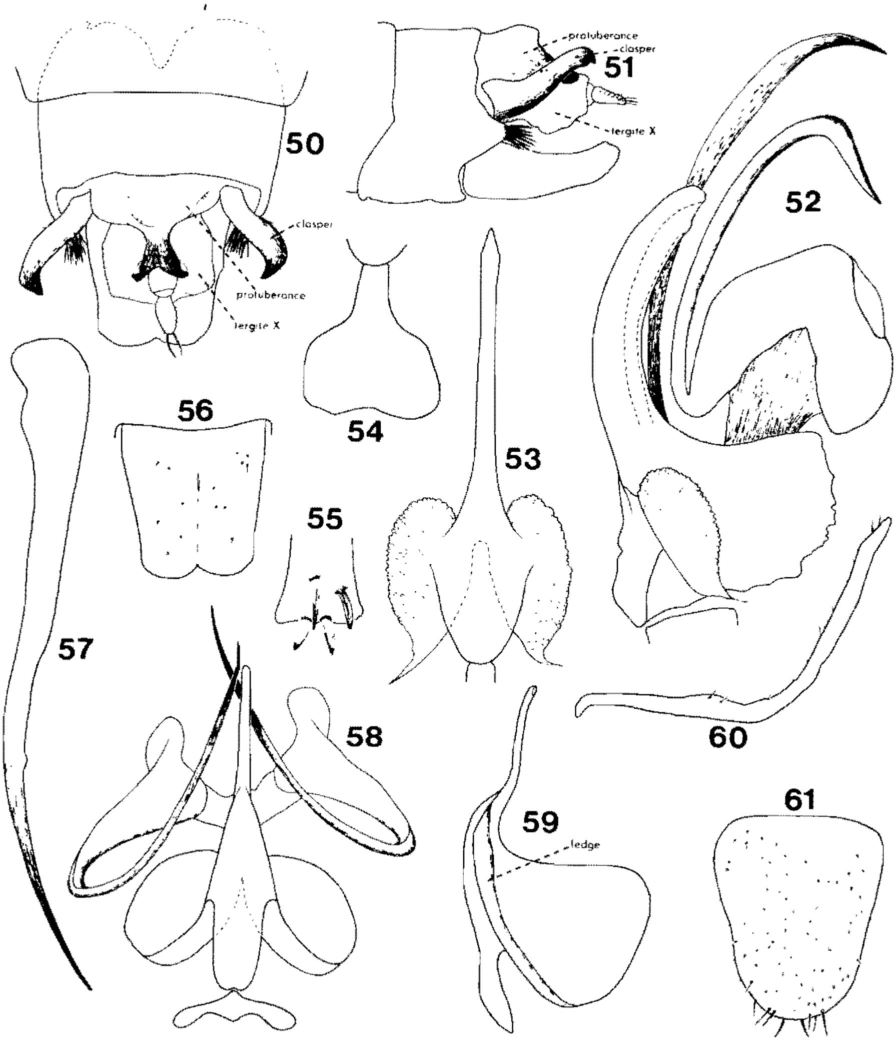
Structure of male terminalia complex (Figs 50, 51). Tergite X large, well sclerotized, but interrupted dorsomedially, where it is overlain by large hinged dorsal protuberance of pygofer, which laterally bears pair of movable, clasper-like appendages. Pygofer basally sometimes with large apodemes and pygofer lobe posteroventrally with brush of setae; no other macrosetae present. Valve undifferentiated, completely fused laterally with pygofer. Plates fused. Aedeagus symmetrical, with tubular or laterally compressed shaft and gonopore apically on dorsal or ventral side; dorsal rim of socle membranously connected to bipartite structure, which bears pair of long, curved, posteriorly directed, acuminate appendages (Fig. 58). Connective articulating with posteroventral part of socle. Styles elongate. Hind margin of 7th abdominal sternite of female always with V-shaped incision.

The peculiar terminalia of the male separate this genus from all the previously described genera.

Modderena albicosta comb. nov., Figs 50–58

Equeefa albicosta Naudé, 1926: 81
Aletta albicosta Evans, 1955: 27

Naudé described this species from a single female, collected at Bloemfontein (J. C. Faure, 14.iv.1918). When the species was redescribed by me some years ago (Theron 1976), no males from the type-locality were unfortunately available and the terminalia of a male, externally very similar to the holotype but collected at Rustenburg, Tvl., were then described and figured. Since then a number of males from the southern Orange Free State became available, but in these the genitalic characters dif-



Figs 50–61. *Modderena* spp. 50–58. *M. albicosta* (Naudé), ♂ from Reddersburg, 50 & 51. Pygofer, dorsal and lateral views. 52. Aedeagus, lateral view. 53. Socle and shaft, ventral view. 54. Connective. 55. Apex of right femur. 56. Fused plates. 57. Style. 58–61. *M. nkomati* sp. nov., ♂. 58. Aedeagus, ventral view. 59. Socle and shaft, lateral view. 60. Style. 61. Fused plates.

fer so much from those of specimens collected in the Transvaal and Natal, that the latter must represent a different species. The taxonomic characters of *M. albicosta* are therefore redefined below.

MALE. Length from apex of crown to tips of tegmina 4,33–5,16 mm; transocular width 1,60–1,88 mm; greatest width of pronotum 1,52–1,76 mm. Ground colour yellowish-brown, mottled with black or fuscous. Crown medially with pale band and apically with conspicuous black spot. Frontoclypeus with 12–15 chequered horizontal arcs. Tegmina mottled with brown and black; variable off-white areas occur along commissural line and typical broad off-white band along costal margin.

Pygofer strongly sclerotized, with dorsal protuberance narrow and terminating posteriorly in forked process (Figs 50, 51). Claspers strongly sclerotized. Shaft of aedeagus laterally flattened and with gonopore dorsally at apex (Fig. 52). Socle posteriorly with pair of shagreened lateral flanges (Fig. 53); appendages of dorsal bipartite structure blade-like. Connective as in Fig. 54 and articulating with median process of socle. Style straight and apophysis long, bare, acuminate (Fig. 57). Plates bearing few microsetae and fused, but line of fusion visible (Fig. 56).

FEMALE. Brachypterous. Length from apex of crown to tips of tegmina 4,58–5,50 mm, to tip of abdomen 5,58–6,25 mm; transocular width 1,64–1,92 mm; greatest width of pronotum 1,56–1,84 mm.

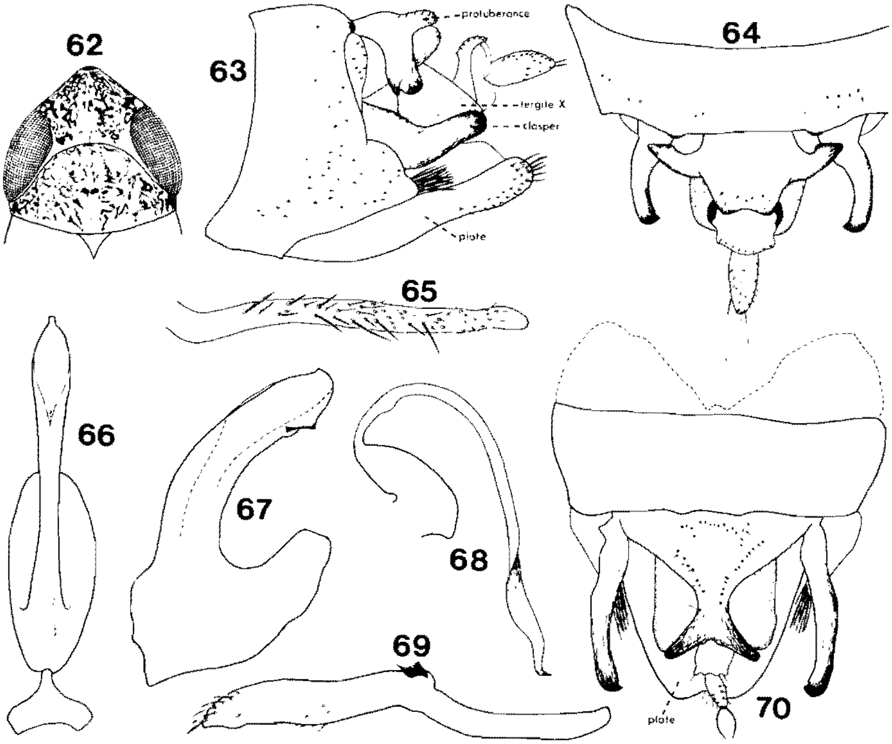
MATERIAL EXAMINED. Holotype, ♀: SOUTH AFRICA: Apart from the holotype ♀ and a male from Reddersburg (20.xii.1978, J. G. Theron), of which the genitalia are figured, the following specimens were examined: 5 ♂, 5 ♀, Edenburg, 12.vii.1977, 20.xii.1977, J. M. Herrmann; 2 ♀ Bloemfontein and Trompsburg, 20.xii.1978, J. G. Theron; 1 ♂, Aberdeen, 17.i.1984, J. G. Theron; 1 ♀, Queenstown, 16.i–10.ii.1923, R. E. Turner; 1 ♂, Queenstown, 20.i.1984, J. G. Theron; 1 ♀, Hendrik Verwoerd Dam, 12.iii.1969, L. C. Starke; 1 ♀, Aliwal North, 28.i.1961, H. A. D. van Schalkwyk, 2 ♀; Bethesda Road, 8.xi.1967, H. K. Munro.

Modderena nkomati sp. nov., Figs 58–65

MALE. Length from apex of crown to tips of tegmina 4,40–5,33 mm; transocular width 1,60–1,76 mm; greatest width of pronotum 1,52–1,72 mm. Colouration as in *M. albicosta,* but pale median band of crown less distinct. Crown more sharply pointed in front than in *M. albicosta* (Fig. 62).

Pygofer as in *M. albicosta,* but dorsal protuberance with wing-like extensions (Figs 63, 64). Shaft of aedeagus narrow, tubular, with small gonopore on dorsal side near apex (Fig. 59). Socle posteriorly with pair of narrow ledges; appendages of dorsal bipartite structure varying from long, needle-like (Fig. 58), to shorter blade-like (in specimens from same locality). Connective small, butterfly-shaped. Style with long, dorsally curving, blade-like apophysis, which bears numerous setae on its upper surface (Figs 60, 65). Plates completely fused with one another, forming convex setose shield (Fig. 61).

FEMALE. Brachypterous. Length from apex of crown to tips of tegmina 4,50–5,25 mm, to tip of abdomen 5,00–6,00 mm; transocular width 1,60–1,80 mm; greatest width of pronotum 1,52–1,76 mm.



Figs 62–70. *Modderena* spp. 62–65. *M. nkomati*, ♂. 62. Head and thorax, dorsal view. 63 & 64. Pygofer, lateral and dorsal views. 65. Apophysis of style, dorsal view. 66–70. *M. vendae* sp. nov., holotype ♂. 66 & 67. Aedeagus, ventral and lateral views (dorsal bipartite structure not shown). 68. Right appendage of dorsal bipartite structure of socle. 69. Style, dorsal view. 70. Pygofer, dorsal view.

MATERIAL EXAMINED. Holotype, ♂: SOUTH AFRICA: Rosslyn, Pretoria, 5.vii.1971, J. G. Theron (NCI). Paratypes: 2 ♀, Pretoria, 13, 20.iii.1972, G. L. Prinsloo (US); 1 ♀, Pretoria, 10.viii.1934, C. Guillarmod (UP); 1 ♀, Pretoria, x.1975, J. Botha (UP); 1 ♀, Pretoria 11.xi.1917, H. K. Munro (NCI); 3 ♂, Pretoria, 10, 17.i.1932, G. van Son (TM); 4 ♂, 4 ♀, Argent, 10.x.1941, 28–31.iii.1942, 1.iv.1942, A. L. Capener (BM); 2 ♂, Bedford Ridge, Johannesburg, 17.i.1942, 14.iv.1948, A. L. Capener (BM); 1 ♀, Val, i.1943, A. L. Capener (BM); 1 ♀, Potchefstroom, 23.i.1975, J. G. Theron (US); 2 ♂, Olifantsnek Dam, Rustenburg, 8.xii.1969, A. Pienaar (NCI & US); 1 ♂, 2 ♀, Rustenburg, 20.x.1945, 14.iii.1947, A. L. Capener (BM); 2 ♂, Vaalhoek, 16–17.i.1963, A. L. Capener (NCI); 2 ♂, 2 ♀, Transvaal, South Africa (BM); 2 ♂, 1 ♀, Durban, 7.i.1971, R. Kluge (US); 1 ♂, 4 ♀, Ladysmith (on grass), 29.i.1981, J. G. Theron (US).

This species is apparently confined to the northern and eastern parts of South Africa. It can be distinguished from *M. albicosta* by the sharply pointed crown and the structure of the aedeagus, styles, connective and dorsal protuberance of the pygofer. All these structures are also considerably smaller than in *M. albicosta*.

Modderena vendae sp. nov., Figs 66–70

MALE. Length from apex of crown to tips of tegmina 6,25 mm; transocular width 2,00 mm; greatest width of pronotum 1,96 mm. Colouration as in *M. albicosta*, but crown without distinct pale median band and apex of each tegmen with eye-like bulge, bearing three black spots.

General structure of pygofer (Fig. 70) resembling that of *M. albicosta*, but plates completely fused. Shaft of aedeagus laterally flattened, with large, flared gonopore on ventral side near apex (Figs 66, 67). Socle simple; appendages of dorsal bipartite structure thin at base but apex laminate and twisted (Fig. 68). Connective as in Fig. 66. Apophysis of style broad and dorsal surface with few setae (Fig. 69).

FEMALE. Brachypterous. Length from apex of crown to tips of tegmina 7,25 mm, to apex of abdomen 8,16 mm; transocular width 2,36 mm; greatest width of pronotum 2,32 mm. Seventh abdominal sternite as in *M. albicosta*.

MATERIAL EXAMINED. Holotype, ♂: SOUTH AFRICA: M'Pefu's Kraal, N. Transvaal (Venda), 7.ii.1941, A. L. Capener (BM). Paratype: 1 ♀, same data as holotype (NCI).

This species is considerably larger than the others and can also be recognized by the structure of the aedeagus, especially the ventral position of the gonopore.

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Accepted 6 June 1984.